

REMARKS

In accordance with the foregoing, claims 1, 4-6, 8-15, 17-18 and 20 have been amended. Claims 2, 3, 7, 16 and 19 have been cancelled without prejudice. Claims 21-26 have been withdrawn. Claims 27-31 have been added. Claims 1, 4-6, 8-15, 17-18, 20 and 27-31 are currently pending, with claims 1, 17, and 20 being independent.

Applicant thanks the Examiner for an interview at the U.S. Patent Office on October 11, 2005. During that interview, Applicant's attorney and the Examiner discussed the differences between a reticulated substrate and a grid-like substrate. Also discussed was an amendment to the claims drawn to a current collector instead of an electrode in claims 1 and 4-16. In addition, Applicant's attorney provided a sample of one type of a reticulated substrate similar to that shown in Fig. 2.

Election/Restriction

Applicant hereby affirms election of claims in Group I, with claims 21-26 withdrawn from consideration.

Rejections under 35 U.S.C. §102

1. Claims 1, 10, 15, 17 and 20

Claims 1, 10, 15, 17 and 20 have been rejected under 35 U.S.C. § 102(b) as anticipated by Fernandez et al. (ES 2110 365 AI, abstract).

Independent claim 1, as amended, recites a current collector for a battery that includes a reticulated substrate with surfaces defining circuitous pores and a layer of a lead-tin containing alloy applied to the surfaces. An example of a reticulated substrate is shown in Fig. 2 (see p. 2, para. 24).

Fernandez shows a lead acid battery having a positive electrode with a lead-calcium grid coated with an alloy of lead and silver. Hence, Fernandez does not describe or suggest a reticulated substrate with surfaces that define circuitous open pores and a layer of a lead-tin containing alloy applied to the surfaces. Instead, Fernandez describes a grid, which is a framework of evenly spaced horizontal and vertical bars with symmetric gaps of equal dimensions.

Accordingly, Applicant submits that claim 1 and the claims depending therefrom are allowable. In addition, the dependent claims recite independently allowable subject matter.

Independent claim 17, as amended, recites an electrode for use in lead-acid batteries that includes a reticulated substrate having surfaces defining circuitous pores, a layer of lead-tin alloy deposited on the surfaces, and a layer of a lead-containing paste on the layer of lead-tin alloy. Independent claim 20, as amended, recites a battery that includes a pair electrodes fixed within the housing, each of the electrodes having a reticulated substrate having surfaces defining circuitous pores, a layer of a metal alloy applied to the surfaces, and an active material coating at least a portion of the metal alloy. Accordingly, claims 17 and 20 are allowable for at least the same reasons as claim 1, as discussed above.

2. Claims 1, 10-11, 15-17, and 20

Claims 1, 10-11, 15-17, and 20 have been rejected under 35 USC § 102(b) as anticipated by Horie (JP 5-74464, abstract). Horie teaches a grid made of a solid base of lead and a layer of a lead-tin alloy applied to at least a portion of the solid base. Similar to Fernandez as explained above, Horie describes a cathode grid consisting of a framework of evenly spaced horizontal and vertical bars with symmetric gaps of equal dimensions. Thus, Horie does not describe or suggest a reticulated substrate with surfaces defining circuitous pores, as recited in independent claims 1, 17, and 20. Accordingly, claims 1, 17, and 20, and the claims that depend therefrom, are allowable.

Rejection under 35 U.S.C. § 103

Claims 2-3, 8, and 19 have been rejected under 35 U.S.C. § 102(b) or under 35 § U.S.C. 103(a) as obvious over Fernandez or Horie. Claims 2-3 and 19 have been cancelled thereby rendering the rejection as moot with respect to these claims.

As explained above, neither Fernandez or Horie describe or suggest a reticulated substrate with surfaces defining circuitous pores, as recited in independent claim 1. Claim 8, as amended, depends from claim 1. Thus, claim 8 is allowable for at least the reasons explained in more detail above.

Rejection under 35 U.S.C. § 112

Claims 1, 10, 14, 16, 17 and 20 have been rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter. Applicant has amended the referenced claims to address the points raised by the examiner.

Claims 1, 17 and 20 have been amended to recite "surfaces defining circuitous pores."

Claim 10 has been amended to recite "a frame mountable in a battery."

Claim 14 has been amended to recite "the thickness of the alloy includes about 20 to 20,000 microns."

Claim 16 has been cancelled.

Applicant respectfully requests withdrawal of these rejections.

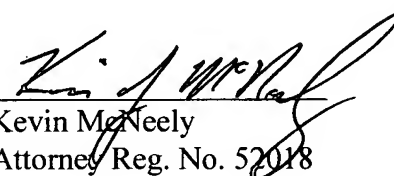
CONCLUSION

Applicant believes that all pending claims are in a condition for allowance and respectfully requests that a timely Notice of Allowance be issued.

Respectfully submitted,

Date: 11/29/05

5335 Wisconsin Ave, NW
Suite 440
Washington, DC 20015
Tele No.: 202 274-0214
Fax No.: 202 478-1813
E-mail: info@miplaw.com

By 
Kevin McNeely
Attorney Reg. No. 52018